

SCIENTIFIC PROGRAM

MONDAY, AUGUST 21

07:50 - 08:00	Welcome and Opening Remarks <i>H. Weinberg</i>	Parkview Terrace
8:00 - 10:00	Plenary Session: Biomagnetism and Human Development <i>Chairs: L. Roberts and G-L. Romani</i>	Parkview Terrace
8:00 PL-1	Neonatal and infant brain research: New frontier for biomagnetism research <i>Yoshio Okada (University of New Mexico, USA)</i>	
8:40 PL-2	Language and the Infant Brain: Developmental Neuroimaging <i>Patricia Kuhl (University of Washington, USA)</i>	
9:20 PL-3	Faces of development: neuroimaging studies <i>Margot Taylor (University of Toronto, Canada)</i>	
10:00 - 10:30	Coffee/Tea Break	Exhibit Hall B
10:00 - 12:00	Poster Session 1 P1-1 Audition P1-2 Plasticity of the Brain and Early Development P1-3 Fetal and Neonatal MEG	Exhibit Hall B
13:00 - 15:00	Symposium 1: Inverse and Forward Modeling <i>Chairs: J. Mosher and S. Nagarajan</i>	Meeting Rooms 11 & 12
13:00 A1-1	Numerical mathematics of the subtraction approach for dipole modeling in Finite Element realistic volume conductors and comparisons with direct approaches <i>C. Wolters*, H. Köstler, C. Möller, J. Härtlein, A. Anwander</i>	
13:20 A1-2	A probabilistic algorithm integrating source localization and noise suppression of MEG/EEG Data <i>J Zumer*, H Attias, K Sekihara, S Nagarajan</i>	
13:40 A1-3	Particle Filters: a new method for reconstructing multiple current dipoles from MEG data <i>A Sorrentino*, M Piana, L Parkkonen</i>	
14:00 A1-4	A novel adaptive beamformer for MEG source reconstruction effective when large background brain activities exist <i>K Sekihara*, K Hild II, S. Nagarajan</i>	
14:20 A1-5	From ECoG near fields to EEG and MEG far fields <i>M Fuchs*, M Wagner, J Kastner, S Hawes-Ebersole, J Ebersole</i>	
14:40 A1-6	L1-norm solution of neural current sources using vector spherical harmonic leadfields <i>M.X. Huang*, T. Song, A.M. Dale, E. Halgren, R.R. Lee, S. Taulu, J. Nenonen, L. Parkkonen, M. Kajola, A. Ahonen</i>	
13:00 - 15:00	Symposium 2: Audition <i>Chairs: D. Poeppel and B. Ross</i>	Meeting Rooms 2 & 3
13:00 A2-1	Auditory evoked MEG responses to inter-aural phase changes: Effects of aging on response latencies <i>K Tremblay*, T Picton, B Ross</i>	
13:20 A2-2	Altered GABA receptor dynamics explains abnormal rhythmic auditory neuromagnetic response in schizophrenia <i>S Stufflebeam*, D Vierling-Claassen, F Lin, P Siekmeier, M Hämäläinen, N Kopell, R McCarley</i>	
13:40 A2-3	Neuromagnetic and neuroelectric oscillatory responses to acoustic stimulation with broadband noise <i>B Johnson*, S Muthukumaraswamy, W Gaetz, D Cheyne</i>	
14:00 A2-4	A motor-auditory cross-modal oddball paradigm revealed top-down modulation of auditory perception in a cross-modal predictive context <i>M. Yumoto*</i>	
14:20 A2-5	Brain activation elicited by the localization of sound sources crossing and not crossing the vertical meridian: a human fMRI/ MEG study <i>M Brunetti, P Belardinelli, C Del Gratta, V Pizzella, S Della Penna, A Ferretti*, M Caulo, F Cianflone, M Olivetti Belardinelli, GL Romani</i>	

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14:40	A2-6	Auditory cortical suppression induced by self-initiated motor-acts <i>A. Sheye*</i> , <i>J.F. Houde</i> , <i>S.S. Nagarajan</i>	
15:00 – 15:30	Coffee/Tea Break		Exhibit Hall B
15:00 - 17:00	Poster Session 2	P2-1 Inverse and Forward Modeling 1 P2-2 Language	Exhibit Hall B
17:00 - 18:30	Workshop 1: Early Development	<i>Chairs: E. Pang and E. Pihko</i>	Meeting Rooms 11 & 12
17:00	A3-1	Development of auditory evoked fields in human fetuses and newborns of high risk pregnancies <i>M Holst, H Eswaran, P Murphy, C Lowery, H Preissl*</i>	
17:20	A3-2	Effects of difficulty and speed on infant mismatch negativity <i>C He*</i> , <i>L Hotson, L Trainor</i>	
17:40	A3-3	Auditory and somatosensory integration in infants <i>J Stephen*</i> , <i>T Zhang, Y Okada</i>	
18:00	A3-4	MEG alpha modulation in children and adults performing a Categorical N-Back Task <i>K Ciesielski*, S Ahlfors</i>	
18:20		General Discussion	
17:00 - 18:30	Workshop 2: Music and Language	<i>Chairs: S. Kuriki and C. Pantev</i>	Meeting Rooms 2 & 3
17:00	A4-1	Brain activities involved in syntactic processing of Japanese sentences <i>S Kuriki*</i> , <i>N Watanabe</i> , <i>F Takeuchi, H Hagiwara</i>	
17:20	A4-2	Neural networks underlying the cross-cultural perception of musical phrase boundaries <i>T Knösche*, Y Nan, B Maess, A Friederici</i>	
17:40	A4-3	Spatiotemporal investigation of neural basis underlying verb and noun processing: A magnetoencephalographic study <i>J Xiang*</i> , <i>YG Feng, Z Xiao, T Ly, S Holowka, D Rose</i>	
18:00	A4-4	Task-related modulation of early evoked responses during language production: An event-related synthetic aperture magnetometry study <i>A Herdman*</i> , <i>E Pang, W Gaetz, V Ressler, D Cheyne</i>	
18:20		Discussion	
18:30 - 20:30	Welcome Reception		South Foyer/ Meeting Room 1

TUESDAY, AUGUST 22

8:00 - 10:00	Sam Williamson Symposium	<i>Chairs: H. Weinberg and Y. Okada</i> *Scientific Contributions of Samuel Williamson to Biomagnetism *	Meeting Rooms 2, 3
8:00	SW-1	Introduction <i>Yoshio Okada (University of New Mexico, USA)</i>	
8:20	SW-2	Instrumentation <i>Jukka Knuutila (Helsinki, Finland)</i>	
8:40	SW-3	Source Estimation <i>John Mosher (Los Alamos, USA)</i>	
9:00	SW-4	Multimodal Integration <i>Matti Hämäläinen (Boston, USA)</i>	
9:20	SW-5	Basic Neuroscience <i>Christo Pantev (Münster, Germany)</i>	
9:40	SW-6	Clinical Neuroscience <i>Nobukazu Nakasato (Sendai, Japan)</i>	
10:00 – 10:30	Coffee/Tea Break		Exhibit Hall B
10:00 - 12:00	Poster Session 3	P3-1 Signal Processing P3-2 Magnetic Particles, Susceptometry, and Other Biomagnetic Measures	Exhibit Hall B

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13:00 - 15:00	Symposium 3: Signal Processing of Brain Dynamics	Meeting Rooms 11 & 12
	<i>Chairs: L. Garnero and R. Leahy</i>	
13:00 B1-1	Time-frequency synchronization likelihood reveals recurrent patterns in ongoing MEG data <i>T Montez*, BW van Dijk, CJ Stam, K Linkenkaer-Hansen</i>	
13:20 B1-2	Analysis of source dynamics from MEG and EEG: spontaneous activity and steady-state evoked responses <i>R Srinivasan*</i>	
13:40 B1-3	Is there a relationship between the temporal frequency and the spatial extent of cortical current flow? <i>G Barnes*, A Hadjipapas, P Adjamian, S Hall, A Hillebrand, P Furlong</i>	
14:00 B1-4	Detecting truly interacting brain systems from MEG data <i>G Nolte*, T Sander, F Meinecke, A Ziehe, L Trahms, K Muller</i>	
14:20 B1-5	Distinguishing background processes in the space-frequency covariance matrix <i>F Bijma*, JC de Munck</i>	
14:40 B1-6	An efficient method for computing cortico-cortical coherence between all source locations <i>R. Oostenveld*, J.M. Schoffelen, P. Fries</i>	
13:00 - 15:00	Symposium 4: Motor Systems: Frequency Aspects	Meeting Rooms 2 & 3
	<i>Chairs: J. Kilner and T. Nagamine</i>	
13:00 B2-1	Cortical beta synchronization is related to specific motor parameters <i>T Boonstra, A Daffertshofer*, P Beek</i>	
13:25 B2-2	Effects of deep brain stimulation on spontaneous sensorimotor MEG activity in a Parkinsonian patient <i>JP Mäkelä*, S Taulu, A Ahonen, J Pohjola, E Pekkonen</i>	
13:50 B2-3	Comparison of non-invasively recorded interleaved motor- and auditory-related focal cortical DC-changes using DC-Magnetoencephalography <i>S Leistner, T Sander-Thoemmes, G Curio, L Trahms, B.-M. Mackert*</i>	
14:15 B2-4	Cortico-cerebellar Coherence in patients with perinatally acquired brain lesions <i>P Belardinelli*, L Ciancetta, C Braun, M Staudt, V Pizzella, N Bierbaumer, GL Romani</i>	
14:40 B2-5	Detection of time-varying cerebral interactions and synchrony in Parkinsonian resting tremor <i>U Barnikol*, M Dafotakis, E Palmero, K Dolan, D Smirnov, H Mohlberg, E Alonso Prieto, K Amunts, K Zilles, HJ Freund, GR Fink, PA Tass</i>	
15:00 – 15:30	Coffee/Tea Break	Exhibit Hall B
15:00 - 17:00	Poster Session 4	Exhibit Hall B
	P4-1 Inverse and Forward Modeling 2	
	P4-2 Motor Systems	
17:00 - 18:30	Workshop 3: Multimodal Imaging	Meeting Rooms 11 & 12
	<i>Chairs: S. Ahlfors and K. Singh</i>	
17:00 B3-1	Comparing BOLD correlates of human alpha and beta rhythms: A simultaneous EEG-fMRI study <i>MG Perrucci, A Ferretti*, C Babiloni, C Del Gratta, GL Romani</i>	
17:15 B3-2	Neuromagnetic correlates of the fMRI BOLD response <i>C Stevenson*, M Brookes, G Barnes, A Hillebrand, S Francis, P Morris</i>	
17:45 B3-4	Imaging of oscillatory cortical activity using combined MEG and fMRI. <i>FH Lin*, T Raij, J Ahveninen, S Ahlfors, S Stufflebeam, J Belliveau, M Hamalainen</i>	
18:00 B3-5	Temporal neuronal-vascular loop based on DC-MEG and time-resolved NIRS recordings <i>T. Sander*, A. Liebert, H. Wabnitz, M. Moeller, M. Burghoff, S. Leistner, G. Curio, B. Mackert, R. Macdonald, L. Trahms</i>	
18:15	Discussion	
17:00 - 18:30	Workshop 4: Magnetic Particles	Meeting Rooms 2 & 3
	<i>Chairs: U. Häfeli and L. Trahms</i>	
17:00 B4-1	Introduction to magnetic nanoparticles <i>U. Häfeli*</i>	
17:15 B4-2	Magnetic immunoassay utilizing magnetic marker and high Tc SQUID <i>K Enpuku, T Nishimoto,</i>	

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		<i>H Tokumitsu, H Kuma, N Hamasaki, A Tsukamoto, K Saitoh, A Kandori*</i>
17:30	B4-3	Immunoassay applications of magnetic nanoparticles <i>H.E. Horng*, C.-Y. Hong, S.Y. Yang, C.C. Wu, H.C. Yang</i>
17:45	B4-4	Flow spectrometry and cytometry with magnetic nanoparticles <i>C Carr, M Espy, H Sandin, C Hanson, M Ward, J Mosher*, R Kraus, M Morales, D Leslie-Pelecky</i>
18:00	B4-5	Magnetorelaxometry quantifies magnetic nanoparticle concentrations in tumors <i>F. Wiekhorst, D. Eberbeck, U. Steinhoff, R. Jurgons, C. Seliger, C. Alexiou, L. Trahms*</i>
18:15		Discussion

WEDNESDAY, AUGUST 23

8:00 - 10:00		Symposium 5: MEG: As Quick as Thought	Meeting Rooms 11 & 12
		<i>Chairs: T. Elbert and C. Tesche</i>	
8:00		Introduction - on the structure of representations <i>T. Elbert</i>	
8:10	C1-1	Increase in the theta and gamma oscillations predicts successful declarative memory encoding and retrieval <i>D. Osipova*, A. Takashima, R. Oostenveld, G. Fernández, E. Maris, O. Jensen</i>	
8:30	C1-2	Differential top-down modulation for language and melody-related activity in the auditory areas: An MEG study <i>T Yasui*, K Kaga, KL Sakai</i>	
8:50	C1-3	Endogenous context for choice making: a magnetoencephalographic study <i>S Braeutigam*</i>	
9:10	C1-4	Neural substrates of social exclusion on self control: A magnetoencephalography investigation <i>BA Clementz*, WK Campbell, EA Krusemark, KA Dyckman, JE McDowell</i>	
9:30	C1-5	Dynamics of frontal and cerebellar activation during aversive conditioning: A MEG study <i>C Tesche*, S Moses, J Houck, T Martin, F Hanlon, E Jackson, D Kicic</i>	
9:50		General Discussion	
8:00 - 10:00		Symposium 6: Somatosensory Systems and Pain	Meeting Rooms 2 & 3
		<i>Chairs: N. Forss and I. Hashimoto</i>	
8:00	C2-1	Magnetic imaging of attention: immediate reorganization in the somatosensory cortex <i>I Hashimoto*</i>	
8:15	C2-2	Effect of pain on somatosensory and motor cortical functions <i>E. Kirveskari*</i>	
8:30	C2-3	Investigation of pain perception following C-fiber stimulation in humans <i>R Kakigi*</i>	
8:45	C2-4	Effects of 7-Hz repetitive electrical median nerve stimulation on excitability of human primary and secondary somatosensory cortices <i>K Torquati, S Della Penna, C Babiloni, R Franciotti, V Pizzella*, GL Romani</i>	
9:00	C2-5	Slow rTMS changed oscillatory MEG activity in two patients with thalamic pain <i>R Kurimoto*, S Ukai, R Ishii, M Iwase, R Sekiyama, K Takahashi, T Nakahachi, L Canuet, K Shinosaki, M Takeda</i>	
9:15	C2-6	Functional oropharyngeal sensory de-afferentation interferes with the cortical control of swallowing <i>I Teismann*, R Dziewas, O Steinstraeter, K Stoeckigt, A Wollbrink, C Pantev</i>	
9:30	C2-7	Simultaneous magnetoencephalography and diffuse optical imaging in adult humans with median nerve stimulation <i>I Nissilä*, S Stufflebeam, M Härmäläinen, MA Franceschini</i>	
9:45		General Discussion	
10:00 – 10:30		Coffee/Tea Break	Exhibit Hall B
10:00 - 12:00		Poster Session 5	Exhibit Hall B
		P5-1 Somatosensory, Pain and Other Senses	
		P5-2 Memory and Cognition	
13:00 - 15:00		Symposium 7: Cortical Oscillations in Cognition	Meeting Rooms 11 & 12
		<i>Chairs: O. Bertrand and O. Jensen</i>	
13:00		General introduction <i>O. Bertrand</i>	
13:05	C3-1	Neural basis of attentive reading: insights from simultaneous MEG and intracranial EEG recordings <i>J.Ph. Lachaux*, S. Baillet, C. Adam, J. Martinerie, O. Bertrand, L. Garnero</i>	

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13:25	C3-2	Moving from one state to another: Dynamics of event-related desynchronization for cognitive state transition <i>Q Luo*</i> , <i>T Holroyd</i> , <i>M Jones</i> , <i>T Hendler</i> , <i>J Blair</i>
13:45	C3-3	To see or not to see: pre-stimulus oscillatory activity in the alpha band predicts visual detection ability <i>H van Dijk</i> , <i>J Schoffelen</i> , <i>R Oostenveld</i> , <i>O Jensen*</i>
14:05	C3-4	TBI patients show abnormal oscillatory activity during a visual feature-matching task <i>W Chau*</i> , <i>B Ross</i> , <i>D Tisserand</i> , <i>A Restagno</i> , <i>T Picton</i> , <i>D Stuss</i> , <i>B Levine</i>
14:25	C3-5	Selective visual attention modulates cortical alpha activity to bias neural processing <i>D Pantazis*</i> , <i>G Simpson</i> , <i>D Weber</i> , <i>C Dale</i> , <i>T Nichols</i> , <i>R Leahy</i>
14:45		General Discussion

13:00 - 15:00	Symposium 8: Biomagnetic Instrumentation	Meeting Rooms 2 & 3
	<i>Chairs: M. Hämäläinen and G-L. Romani</i>	
13:00	Introduction <i>M. Hämäläinen and G-L. Romani</i>	
13:05	C4-1 Realtime feedback stimulation and online magnetic field tomography for magnetoencephalography <i>H Rongen*</i> , <i>V Hadamschek</i> , <i>M Majtanik</i> , <i>M Schiek</i> , <i>K Ziemons</i>	
13:20	C4-2 Paving the way for cross-site pooling of MEG data <i>M Weisend*</i> , <i>F Hanlon</i> , <i>R Montano</i> , <i>C Donahue</i> , <i>S Ahlfors</i> , <i>A Leuthold</i> , <i>J Mosher</i> , <i>A Georgopoulos</i> , <i>M Hämäläinen</i> , <i>C Aine</i>	
13:35	C4-3 Detection of auditory evoked responses with atomic magnetometer <i>H Xia*</i> , <i>A Baranga</i> , <i>D Hoffman</i> , <i>M Romalis</i>	
13:50	C4-4 Highly sensitive GMR-based sensors for biomagnetism <i>M Pannetier-Lecoeur*</i> , <i>C Fermon</i> , <i>H Polovy</i> , <i>J Simola</i>	
14:05	C4-5 Magnetocardiography of mice using a self-shielding multichannel SQUID device <i>F. Wiekhorst*</i> , <i>R. Ackermann</i> , <i>U. Steinhoff</i> , <i>M. Burghoff</i> , <i>T. Schurig</i> , <i>H. Koch</i> , <i>R. Fischer</i> , <i>M. Bader</i> , <i>H. Ogata</i> , <i>H. Kado</i>	
14:20	C4-6 Adaptation of a 304-channel MEG system to record Low Field Nuclear Magnetic Resonance <i>F Thiel</i> , <i>S Hartwig</i> , <i>A Vorwerk</i> , <i>R Orglmeister</i> , <i>L Trahms</i> , <i>M Burghoff*</i>	
14:35	C4-7 Multi-sensor system for simultaneous ultra-low-field MRI and MEG <i>V Zotev*</i> , <i>A Matlachov</i> , <i>P Volegov</i> , <i>M Espy</i> , <i>J Mosher</i> , <i>S Newman</i> , <i>R Kraus</i>	
14:50	Discussion	
15:00 – 15:30	Coffee/Tea Break	Exhibit Hall B
15:00 - 17:00	Poster Session 6 P6-1 Magnetocardiography P6-2 Vision	Exhibit Hall B
15:00 - 17:00	Business Meeting	Meeting Rooms 11 & 12
18:30 - 21:00	Banquet	Ballroom C

THURSDAY, AUGUST 24

8:00 - 10:00	Symposium 9: Epilepsy	Meeting Rooms 11 & 12
	<i>Chairs: H. Otsubo and H. Stefan</i>	
8:00	D1-1 A parameter for estimation of good outcome in focal epilepsy surgery <i>S Rampp*</i> , <i>G Scheler</i> , <i>A Paulini</i> , <i>M Kaltenhäuser</i> , <i>H Stefan</i>	
8:15	D1-2 MEG evaluation of seizure foci in patients with repetitive seizures after epileptic surgery <i>YY Lin*</i> , <i>YH Shih</i> , <i>TT Wong</i> , <i>ZA Wu</i> , <i>LT Ho</i>	
8:30	D1-3 Effect of general anesthetic agents on successful detection of interictal epileptic activity in MEG scans <i>G Balakrishnan</i> , <i>K Grover</i> , <i>KM Mason</i> , <i>BJ Smith</i> , <i>GL Barkley</i> , <i>N Tepley</i> , <i>SM Bowyer*</i>	

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8:45	D1-4	MEG coherence imaging compared to electrocortical recordings from NeuroPace implants to determine the location of ictal onset in epilepsy patients <i>J Moran*</i> , <i>A Manoharan</i> , <i>S Bowyer</i> , <i>K Mason</i> , <i>N Tepley</i> , <i>M Morrell</i> , <i>D Greene</i> , <i>B Smith</i> , <i>G Barkley</i>
9:00	D1-5	MEG and EEG in the identification of the epileptic focus in tuberous sclerosis epilepsy surgery candidates <i>G Huiskamp*</i> , <i>F Jansen</i>
9:15	D1-6	Comparison of animated spatial-filtered magnetoencephalography data <i>A Hashizume*</i> , <i>K Kurisu</i> , <i>K Iida</i> , <i>R Hanaya</i> , <i>H Shirozu</i>
9:30	D1-7	Orientation of equivalent current dipole may predict epileptogenic side in central and interhemispheric MEG spikes <i>KA Salayev*</i> , <i>N Nakasato</i> , <i>M Ishitobi</i> , <i>H Shamoto</i> , <i>A Kanno</i> , <i>S Tsuchiya</i> , <i>K Iinuma</i>
9:45	D1-8	A machine learning algorithm for automatic detection of epileptic spikes in magnetoencephalography data <i>H.T. Attias*</i> , <i>W. Mcclay</i> , <i>S.S. Nagarajan</i>

8:00 - 10:00	Symposium 10: MCG: Magnetocardiography: From Bench to Bedside	Meeting Rooms 2 & 3
	<i>Chairs: R. Fenici and B. Hailer</i>	

Bench

8:00	D2-1	Multichannel magnetocardiography: a non-invasive tool for acute and longitudinal cardiac electrophysiologic study of experimental animals in anaesthetized and awake conditions <i>D Brisinda*</i> , <i>ME Caristo</i> , <i>R Fenici</i>
8:20	D2-2	Diagnosis of the location of myocardial injury using mouse/rat magnetocardiogram system with a single-chip SQUID magnetometer array <i>K Komamura*</i> , <i>J Kawai</i> , <i>Y Adachi</i> , <i>M Miyamoto</i> , <i>G Uehara</i> , <i>Y Haruta</i>
8:30	D2-3	Time course of changes in cardiac magnetic field mapping after myocardial infarction in rats <i>R Fischer*</i> , <i>A Gapelyuk</i> , <i>N Wessel</i> , <i>K Gruner</i> , <i>A Gruner</i> , <i>D Mueller</i> , <i>R Dietz</i> , <i>A Schirdewan</i>

Ischemic Heart Disease

8:40	D2-4	Clinical application of MCG in ischemic heart disease <i>B Hailer*</i> , <i>P van Leeuwen</i>
9:00	D2-5	More dynamic changes in the acute ischemic MCG than in the chronic infarction MCG <i>K. Kim*</i> , <i>B. Joung</i> , <i>N. Chung</i> , <i>Y. H. Lee</i> , <i>H. Kwon</i> , <i>Y. G. Ko</i> , <i>H. K. Lim</i> , <i>J. M. Kim</i> , <i>Y. K. Park</i>
9:10	D2-6	Use of magnetocardiography to detect viable myocardium susceptible to ischemia in patients with ST-segment elevation myocardial infarction <i>V Sosnytskyi*</i> , <i>O Gurjeva</i> , <i>A Parkhomenko</i> , <i>V Kozlovsky</i> , <i>O Zahrabova</i> , <i>T Ryzhenko</i>
9:20	D2-7	Sensitivity and specificity of magnetocardiography in the diagnosis of coronary artery disease <i>C Berndt*</i> , <i>I Chaikovsky</i> , <i>J Korfer</i> , <i>D Horstkotte</i>

Clinical Electrophysiology

9:30	D2-8	Magnetocardiographic electroanatomical imaging for pre-interventional evaluation of a arrhythmogenic substrates <i>R Fenici*</i> , <i>D Brisinda</i>
9:50	D2-10	Magnetocardiography is sensitive to differences in inter-atrial conduction in patients with paroxysmal lone atrial fibrillation <i>V Mäntynen*</i> , <i>A-M Vitikainen</i> , <i>R Koskinen</i> , <i>J Montonen</i> , <i>M Mäkijärvi</i> , <i>L Toivonen</i>
10:00		Conclusions

10:00 – 10:30	Coffee/Tea Break	Exhibit Hall B
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10:00 - 12:00	Poster Session 7 P7-1 Biomagnetic Instrumentation P7-2 Epilepsy	Exhibit Hall B
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13:00 - 15:00	Symposium 11: MEG and Neuropsychiatry	Meeting Rooms 11 & 12
	<i>Chairs: R. Coppola and B. Rockstroh</i>	
13:00	Introduction R. Coppola	
13:20 D3-1	Evoked and induced low frequency superior temporal gyrus abnormalities in schizophrenia <i>JC Edgar*, A Matos-Lamourt, MP Weisend, RJ Thoma, FM Hanlon, LE Adler, JM Canive, GA Miller</i>	
13:40 D3-2	Deviant affective processing in schizophrenia <i>B Rockstroh*, M Junghoefer, E Saleptsi, A Keil, T Elbert</i>	
14:00 D3-3	Prefrontal dysfunction among the schizophrenia patients in Stroop word-color interference: an MEG study <i>R Ishii*, S Kawaguchi, R Kurimoto, L Canuet, M Iwase, S Ukai, K Shinosaki, T Yoshimine, SE Robinson, M Takeda</i>	
14:20 D3-4	Characterization of somatosensory responses across clinical groups and MEG systems <i>R Montaña*, J Stephen, J Knoefel, J Adair, B Hart, C Aine</i>	
14:40	Discussant <i>G. Miller</i>	
13:00 - 15:00	Symposium 12: Visual Systems	Meeting Rooms 2 & 3
	<i>Chairs: I. Holliday and Y. Kaneoke</i>	
13:00 D4-1	Physiological evidence that motion direction is processed by the neural mechanism distinct from that of speed <i>Y Kaneoke*</i>	
13:20 D4-2	Neuromagnetic brain responses during 3D object perception from 2D optic flow <i>S Iwaki*, G Bonmassar, J.W. Belliveau</i>	
13:40 D4-3	Investigating the relationship between visual evoked potentials and ongoing background oscillations <i>A Mazaheri*, O Jensen</i>	
14:00 D4-4	Odour conditioned faces attract preferential initial visual processing <i>M Junghoefer*, C Dobel, C Putsche, H Schupp, J Kissler, C Pantev</i>	
14:20 D4-5	Configural and featural information in face processing <i>C Stroud*, C Rieth, M Saffer, J Rietschel, D Poeppel</i>	
14:40 D4-6	Does the polarity of observed MEG sources reflect top-down vs. bottom-up processing in the human brain? <i>SP Ahlfors*, SR Jones, R Haslinger, JP Ahveninen, JW Belliveau, M Bar</i>	
15:00 – 15:30	Coffee/Tea Break	Exhibit Hall B
15:00 - 17:00	Poster Session 8	Exhibit Hall B
	P8-1 MEG and Neuropsychiatry	
	P8-2 Presurgical Mapping, Stroke, and Other Clinical MEG Applications	
	P8-3 Fetal Magnetocardiography	
17:00 - 18:30	Workshop 5: European Task Force on MCG	Meeting Rooms 11 & 12
	<i>Chairs: J Montonen and P. Van Leeuwen</i>	
17:00 D5-1	European Task Force on Magnetocardiography <i>P Van Leeuwen*</i>	
17:15 D5-2	A data conversion technique to obtain a standardized MCG representation <i>M Burghoff*, U Steinhoff</i>	
17:30 D5-3	Quantification of cardiac magnetic field orientation <i>B Hailer*, P Van Leeuwen, S Lange, A Klein, D Geue, K Seybold, C Poplutz, D Groenemeyer</i>	
17:45 D5-4	Predictive value of resting magnetocardiography in patients with stable angina <i>D Brisinda, R Fenici*</i>	
18:00 D5-5	Estimation of heart rate entropy during adenosine induced stress in CAD patients and controls <i>M Gornig, S Lau, M Liehr, H Figulla, U Leder, J Hauelsen*</i>	
18:15 D5-6	Detection and localization of ischemic heart disease by MCG and ECG mapping <i>M Makijarvi, J Montonen*</i>	
17:00 - 18:30	Workshop 6: Fetal and Neonatal MEG	Meeting Rooms 2 & 3
	<i>Chairs: C. Lowery and U. Schneider</i>	
17:00 D6-1	How does stimulus rate affect newborn somatosensory evoked magnetic fields? <i>P Nevalainen*, L Lauronen, A Sambeth, H Wikström, Y Okada, E Pihko</i>	

SCIENTIFIC PROGRAM

17:15	D6-2	Infant MEG study reveals development of Broca's area activity during speech perception <i>T Imada*, Y Zhang, M Cheour, S Taulu, A Ahonen, P Kuhl</i>
17:30	D6-5	Fetal MEG: auditory, visual and spontaneous brain activity <i>H Eswaran*, H Preissl, P Murphy, C Lowery</i>
17:45	D6-4	Increased fetal flash evoked response rate validated by bootstrap significance measures <i>P Murphy, H Preissl, H Eswaran, J McCubbin*, J Wilson, C Lowery</i>
18:00	D6-3	Visual habituation in the human fetus <i>C Schaller*, H Eswaran, H Preissl, JD Wilson, DM Oglesby, CL Lowery</i>
18:15	D6-6	Synthetic steroids used for the induction of fetal lung maturation delay cortical processing of auditory stimuli <i>U Schneider*, C Weiss, C Arnscheidt, M Schwab, R Huonker, J Haueisen, E Schleussner</i>

FRIDAY, AUGUST 25

8:00 - 10:00	Symposium 13: Presurgical Mapping	Meeting Rooms 11 & 12
	<i>Chairs: M. Funke and T. Roberts</i>	
8:00	Introduction <i>T. Roberts</i>	
8:15	E1-1 Noninvasive evaluation of language dominance and localization using synthetic aperture magnetometry: comparison with the Wada test and stimulation mapping <i>M Hirata*, A Kato, Y Saitoh, H Kishima, S Oshino, N Tani, N Hashimoto, H Ninomiya, S Yorifuji, T Yoshimine</i>	
8:45	E1-3 Evaluating the functional integrity of mesial temporal structures through a multimodal association task <i>E Castillo*, D Men, J Breier, C Boake, M Pearlman, A Papanicolaou</i>	
9:00	E1-4 Multimodal brain imaging for presurgical planning: Integration of MEG, fMRI, and MR spectroscopy <i>J Lewine*, W Brooks, A Pollack, J Grant, C Savage</i>	
9:15	E1-5 Reimbursement <i>M. Funke</i>	
9:30	Panel Discussion	
8:00 - 10:00	Symposium 14: Fetal Magnetocardiography	Meeting Rooms 2 & 3
	<i>Chairs: R. Wakai and A. Kandori</i>	
8:00	E2-1 Comparison of the performances of various Independent Component Analysis algorithms for fetal signal reconstruction from real FMCG datasets <i>S Comani*, D Mantini, KE Hild II, G Alleva</i>	
8:25	E2-2 Standardization of time interval using normal component of FMCG signals <i>A Kandori*, K Ogata, H Horigome, T Hosono, T Miyashita, K Tsukada, Y Watanabe, K Tanaka, Y Oka</i>	
8:50	E2-3 The maturation of the autonomic nervous system represented in fetal beat-to-beat heart rate variability <i>U Schneider*, B Frank, D Hoyer, A Fiedler, M Liehr, J Haueisen, E Schleussner</i>	
9:15	E2-4 Prenatal diagnosis of congenital long QT syndrome using magnetocardiography <i>H Horigome*, T Hosono, A Kandori, Y Watanabe, K Tanaka, K Tsukada</i>	
9:40	E2-5 Clinical applications for fetal magnetocardiography <i>J Strasburger*, R Wakai, Z Li, A Mensa-Brown, B Cuneo, N Gotteiner, S Srinivasan, H Zhao</i>	
10:00 - 11:00	Joint Public Lecture	Meeting Rooms 2 & 3
	The impact of science on our society <i>Urs Ribary (NYU)</i>	
11:00 - 12:00	Closing Ceremony	Meeting Rooms 11 & 12

SATURDAY, AUGUST 26

8:00 - 12:00	International MEG Applications Society Meeting	SFU at Harbour Centre – Fletcher Challenge Theater (Room 1900)
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POSTER LISTING

P1-1 Audition

- P-001 Phase dynamics in the 40hz auditory steady state response *D Bosnyak**, *S Stevens*, *P Gander*, *L Roberts*
- P-002 Does auditory discrimination training in nonmusicians modify representations in both primary and secondary auditory cortex? *D Bosnyak**, *P Gander*, *L Roberts*
- P-003 MEG localization of the suspected cortical generators of tinnitus *SM Bowyer**, *M Seidman*, *K Elisevich*, *D De Ridder*, *KM Mason*, *J Dria*, *Q Jiang*, *I Darrat*, *F Leong*, *N Tepley*
- P-004 Sources of auditory sensory processing revealed by event-related synthetic aperture magnetometry *F Carver**, *C Reynolds*, *J Mitchell-Francis*, *T Holroyd*, *R Coppola*
- P-005 Peripherally and centrally generated auditory steady-state responses and sources to 40 Hz tone-beats *R Draganova**, *B Ross*, *A Wollbrink*, *C Pantev*
- P-006 Modulation of functional coupling between auditory cortical areas during dichotic listening of speech sounds: neuromagnetic evidence *R Franciotti*, *A Brancucci*, *S Della Penna*, *C Babiloni*, *P Capotosto*, *V Pizzella**, *D Rossi*, *F Vecchio*, *PM Rossini*, *GL Romani*
- P-007 MEG responses to dichotic speech stimuli reveal interactions between ipsilateral and contralateral auditory pathways *S Della Penna*, *A Brancucci*, *C Babiloni*, *R Franciotti*, *V Pizzella**, *D Rossi*, *PM Rossini*, *K Torquati*, *GL Romani*
- P-008 Modulation of the 40-Hz auditory steady state response by attention during acoustic training *P Gander**, *D Bosnyak*, *R Wolek*, *L Roberts*
- P-009 Effect of amplitude-modulation of background noise on auditory evoked fields *H Hiraumi**, *T Nagamine*, *T Morita*, *Y Naito*, *H Fukuyama*, *J Ito*
- P-010 Task-induced lateralization of the auditory M100 during categorical discrimination *R König**, *C Sieluzycski*, *C Simserides*, *H Scheich*
- P-011 Responsiveness of the auditory cortex to repeated stimuli of musical timbre and speech sounds *K Ohta*, *S Kuriki**, *S Koyama*
- P-012 Generators of gamma-band activities in response to rare and novel stimuli during auditory oddball study *B Lee**, *K Park*
- P-013 Intra-run stability of M50 auditory gating in a paired-click paradigm *P Lysne*, *R Montano*, *F Hanlon*, *R Bantz*, *L Lundy*, *M Euler*, *M Weisend*, *V Clark*, *R Thoma**, *B Hart*
- P-014 The processing of rising-intensity tonal and speech stimuli in young adults: Effects of spectral complexity on cortical activation *L.-E. Matilainen**, *S.S. Talvitie*, *P. Alku*, *A.M. Mäkelä*, *V. Mäkinen*, *P.J.C. May*, *E. Pekkonen*, *H. Tiitinen*
- P-015 The role of adaptation-based memory in auditory cortex *P.J.C. May**, *H. Tiitinen*
- P-016 Overlapping auditory 'what' and 'where' processes in cortex *P.J.C. May**, *N.H. Salminen*, *H. Tiitinen*
- P-017 Cortical activities evoked by air- and bone-conducted sounds with frequency variations in an audible to ultrasonic range *S Nakagawa**
- P-018 Measurement of MEG N1m responding to pairs of tone bursts and its modeling using a time window *M. Abe*, *I. Nemoto**, *M. Kawakatsu*, *M. Kotani*
- P-019 Lateral inhibition from low and high pass slopes of the notch filtered noise *H Okamoto**, *R Kakigi*, *A Gunji*, *C Pantev*
- P-020 N1m responses elicited by two simultaneously presented narrow-band noises *H Okamoto**, *H Stracke*, *C Pantev*
- P-021 Effects of basic musical structure on auditory evoked MEG responses *A Otsuka**, *T Hasegawa*, *S Kuriki*
- P-022 Hemispheric asymmetry in N100m current sources in auditory evoked fields: Comparison of ipsilateral versus contralateral responses *I Ozaki**, *CY Jin*, *Y Suzuki*, *M Baba*, *I Hashimoto*
- P-023 Unilateral abnormalities in auditory evoked fields observed in children with Landau-Kleffner Syndrome *EW Pang**, *H Otsubo*, *R Sharma*, *A Hunjan*, *B Chu*, *OC Snead*
- P-024 Frequency organization of the 40-HZ auditory steady state response in normal hearing subjects and in Tinnitus *C Wienbruch*, *I Paul*, *N Weisz*, *T Elbert*, *L Roberts**
- P-025 Sensitivity of EEG and MEG to auditory evoked responses modulated by increased spectral content of sounds *AJ Shahin**, *LE Roberts*, *K McDonald*, *C Alain*
- P-026 Auditory evoked magnetic fields in relation to center frequency and bandwidth *Y Soeta**, *S Nakagawa*
- P-027 Auditory evoked magnetic fields in relation to performance of sound localization *Y Soeta**, *S Nakagawa*
- P-028 The effects of cortical stroke on the processing of rising-intensity tonal and speech stimuli *S.S. Talvitie**, *L.-E. Matilainen*, *P. Alku*, *A.M. Mäkelä*, *V. Mäkinen*, *P. May*, *E. Pekkonen*, *H. Tiitinen*

POSTER LISTING

- P-029 Measurement and modeling of phase synchronization of ASSR in MEG evoked by optimized chirp stimuli
K Tanaka, M Kawakatsu, I Nemoto*
- P-030 Place of articulation encoding revisited: The roles of P50m and N100m *K Tavabi*, J Obleser, C Pantev*
- P-031 The effects of aging on the processing of rising-intensity tonal and speech stimuli *H. Tiitinen*, L.-E. Matilainen, S.S. Talvitie, P. Alku, A.M. Mäkelä, V. Mäkinen, P.J.C. May, E. Pekkonen*
- P-032 Anomalous auditory gamma-frequency generators in early-onset psychosis *T.W. Wilson*, O.O. Hernandez, P.D. Teale, R.M. Asherin, M.L. Reite, D.C. Rojas*
- P-033 Auditory high-frequency abnormalities in autism: MEG evidence for aberrant local circuitry *T.W. Wilson*, D.C. Rojas, M.L. Reite, P.D. Teale, S.J. Rogers*
- P-034 What does the didgeridoo? Nonlinear dynamics applied to a MEG study of brain responses to music *C Witton*, A Hadjipapas, P Furlong, I Holliday, G Barnes*
- P-035 Late auditory evoked response components investigated in a large group of normal hearing subjects
*A Wollbrink, C Pantev**
- P-036 The study on auditory area function of right and left hemisphere in human *Y Suzuka*, K Yamada, M Higuchi, N Hatsusaka, K Tomoda*
- P-037 Scrutinizing the tinnitus distress network using single trial auditory steady-state responses *W Schlee*, N Weisz, K Dohrmann, T Hartmann, T Elbert*

P1-2 Plasticity of the Brain and Early Development

- P-038 Developmental change in auditory evoked magnetic fields to musical sound in children *T Fujioka*, L Trainor, R Kakigi, C Pantev, B Ross*
- P-039 Melodic encoding in auditory cortex lasts in aged musicians *T Fujioka*, L Trainor, T Picton, B Ross*
- P-040 Atypical patterns of somatosensory representation after stroke *E Castillo*, D Men, J Breier, M Pearlman, C Boake, A Papanicolaou*
- P-041 Auditory cortical plasticity in learning to discriminate modulation rate *V.V. Wassenhove, S.S. Nagarajan**

P1-3 Fetal and Neonatal MEG

- P-043 Fetal spontaneous brain activity using magnetoencephalography *H Eswaran, H Preissl, P Murphy, C Lowery**
- P-044 Assessment of fetal autonomic nervous system activity and heart rate variability by fetal magnetocardiography: Comparison of normal pregnancies and intrauterine growth restrictions *A Fukushima*, K Nakai, R Oyama, J Murotsuki, T Sugiyama, A Suwabe, H Horigome, M Itoh, K Kobayashi, M Yoshizawa*
- P-045 Validation of flash evoked response from fetal MEG *J McCubbin*, P Murphy, H Eswaran, H Preissl, T Yee, J Vrba, S Robinson*
- P-047 Improved light stimulus system for fetal MEG applications *J Wilson*, H Eswaran, H Preissl, A Adams, P Murphy, J McCubbin, C Lowery*
- P-410 Detecting uterine MMG contractions using a multiple change point detector and the K-means cluster algorithm
P la Rosa, A Nehorai, H Eswaran, C Lowery, H Preiss*
- P-411 MEG study of brain dynamics in young children born extremely preterm *I Cepeda, R Grunau*, H Weinberg, A Herdman, T Cheung, A Amir, M Liotti*

P2-1 Inverse and Forward Modeling 1

- P-048 Localizing complex neural circuits without bias due to source correlation *P Belardinelli*, L Marzetti, L Ciancetta, V Pizzella, G Nolte, GL Romani*
- P-049 MEG imaging using the EM algorithm with block sparseness penalization *A Bolstad, B Van Veen*, R Nowak, R Wakai*
- P-050 A dual source approach to non-linear beamforming *M.J. Brookes*, C.M. Stevenson, G.R. Barnes, A. Hillebrand, M.I.G. Simpson, S.T. Francis, P.G. Morris*
- P-051 Parametric surface-source modeling and estimation with electroencephalography *N Cao, IS Yetik, A Nehorai*, C Muravchik, J Haueisen*
- P-052 Improved pseudo current density distribution based on 2D FT *M Budnyk, I Chaikovsky*, T Ryzhenko*
- P-053 Decomposition of magnetic map according to multipole expansion *M Budnyk, I Chaikovsky*, V Budnyk*

POSTER LISTING

- P-054 GRID based exhaustive search optimisation is a practical and very robust method for fitting a single equivalent-current-dipole model to MEG data *KS Cover**, *BW van Dijk*
- P-055 Spatiotemporal dynamics of cortical networks preceding finger movement and speech production *S. Dalal**, *E. Edwards*, *H. Kirsch*, *R. Canolty*, *M. Soltani*, *N. Barbaro*, *R. Knight*, *S. Nagarajan*
- P-056 Epicardial current source distribution with an ellipsoidal model *M De Melis**, *H-P Mueller*, *D Di Pietro Paolo*, *W Tedeschi*, *M Goernig*, *SN Ern *
- P-057 Dynamic causal modelling of the mismatch negativity *M Garrido**, *K Friston*, *K Stephan*, *T Baldeweg*, *S Kiebel*, *J Kilner*
- P-058 Comparison of signals acquired with different MEG systems using an extrapolation method based on minimum-norm estimates *M Hamalainen**, *A Ahlfors*, *C Aine*, *A Georgopoulos*, *A Leuthold*, *J Mosher*, *M Weisend*
- P-059 Effect of smoothing operators on the performance of iterative Lp norm minimization algorithms *J.M. Han**, *J.S. Kim*, *C.K. Chung*, *K.S. Park*
- P-060 Adaptive brain imaging *R Hasson**, *M Zanchi*
- P-061 Altruism in evolutionary algorithms for the reconstruction of brain activity *J Haueisen**, *T Kn sche*
- P-062 Vector-based spatial temporal minimum L1-norm solution for MEG *M.X. Huang**, *A.M. Dale*, *T. Song*, *E. Halgren*, *D.L. Harrington*, *I. Podgorny*, *J.M. Canive*, *S. Lewis*, *R.R. Lee*
- P-063 Analytical solution of inverse problem in magnetocardiography : new approaches and results *I Nedayvoda*, *M Primin**
- P-064 Multi-dipole estimation using the spherical conductor modeling and its Gibbs-like phenomenon locations *K Kishida**, *Y Yokota*, *Y Hamaguchi*, *S Iwaki*
- P-065 Current density estimation applied LORETA for MCG *K Kobayashi**, *M Fujii*, *M Yoshizawa*, *K Nakai*, *M Itho*, *Y Uchikawa*
- P-066 Bioelectric and biomagnetic neuronal source modeling and imaging for the preparation of neurosurgery investigations *W. Kullmann**, *T. Bischof*
- P-067 Low resolution conductivity fitting for dipole source localization *S Lew**, *C Wolters*, *R MacLeod*, *A Anwender*, *S Makeig*
- P-068 Maximum-likelihood detection and estimation of rank one MEG activity *T Limpiti**, *B Van Veen*, *R Wakai*
- P-069 Current density distributions of independent sources during directed spatial attention computed by sparse bayesian learning *S Makeig**, *R Ramirez*, *D Weber*, *D Wipf*, *C Dale*, *G Simpson*
- P-070 On voxel-wise orthonormal leadfield matrix *A Matani**, *Y Naruse*, *Y Terazono*, *T Hayakawa*, *N Fujimaki*
- P-071 Comparison of dipole fit and beamformer localization with different head models: Simulations using a realistically shaped physical model *P McVeigh**, *A Bostan*, *D Cheyne*
- P-072 Modeling the current distribution during transcranial direct current stimulation *P Miranda**, *M Lomarev*, *M Hallett*
- P-073 Direct reconstruction of multiple equivalent current dipoles using vector MEG *T Nara*, *J Oohama*, *S Ando*, *T Takeda**
- P-074 Localization accuracy and temporal resolution of MEG: a phantom experiment *C Papadelis**, *K Haruhana*, *A Ioannides*
- P-075 Implicit meshes for MEG/EEG forward problem with 3D finite element method *T Papadopoulos**, *S Vallagh *, *M Clerc*
- P-076 Particle filters and RAP-MUSIC in MEG source modelling: a comparison *A Pascarella**
- P-077 A numerical study of skull inhomogeneity in a BEM model *S Plis**, *J George*, *S Jun*, *D Ranken*, *D Schmidt*

P2-2 Language

- P-079 MR-FOCUSS locations of speech onset based on significance level thresholds *SM Bowyer**, *JE Moran*, *SM Nagel*, *N Tepley*
- P-080 Mapping language functional areas of volunteer whose mother language is Chinese *H Qiao**, *B Sun*, *Y Zhang*, *Y Feng*, *N Shu*
- P-081 Hemispheric language dominance with MEG in focal epilepsy patients as a possible screening method for the intracarotid amobarbital procedure *D Foxe**, *M Ishitobi-Hayashi*, *D Wakeman*, *S Knake*, *E Grant*, *B Dworetzky*, *A Nelson*, *B Bourgeois*, *A Cole*, *S Stufflebeam*
- P-082 Dynamic neural activation during lexical judgments analyzed with an fMRI-constrained MEG multi-dipole method *N Fujimaki*, *T Hayakawa**, *A Ihara*, *Q Wei*, *S Munetsuna*, *A Matani*, *Y Okabe*

POSTER LISTING

- P-083 Neuromagnetic responses to visually presented words with masked repetition priming *N Fujimaki, T Hayakawa, A Ihara*, S Munetsuna, A Matani*
- P-084 Cortical representation of phonemic and phonetic contrasts in Japanese vowel *S Funatsu*, S Imaizumi, A Hashizume, K Kurisu*
- P-085 Semantic contextual effects on neural activities related to word processing during a categorical decision task *T Hayakawa*, N Fujimaki, Y Terazono, A Matani*
- P-086 Resolution processing of lexical ambiguity with multiple meanings: A magnetoencephalographic study *A Ihara*, N Fujimaki, T Hayakawa, Q Wei*
- P-087 MEG as a measure of neural plasticity in lexical learning *P Zwitserlood, C Dobel, B Klauke, C Breitenstein, M Junghoefer**
- P-088 An inter-stimulus interval effect on early part of slow field differed between Native and non-Native vowels in Japanese speakers *S Koyama*, Y Toyosawa, F Takeuchi, M Matsui, S Kuriki*
- P-089 The processing of antonym relations: an MEG study *B Maess*, K Diers, D Roehm*
- P-090 Investigating comprehension differences in normal and impaired readers using magnetoencephalography (MEG) *M. Mody*, D. Wehner, S. Ahlfors, S. Mosher, B. Rosen, K. Marchione, P. Skudlarski, S. Shaywitz, B. Shaywitz*
- P-091 Spectrotemporal analysis of immediate repetition priming using MEG *P Monahan*, R Fiorentino, D Poeppel*
- P-092 Auditory evoked fields predict language ability and impairment in children *J Oram Cardy*, E Flagg, W Roberts, TPL Roberts*
- P-093 Neural mechanisms of visual rhyming in autism *E Peterson, E Winterrowd, S Hepburn, D Rojas**
- P-095 Frequency analysis of neuromagnetic signals during a verbal generation task with/without vocalization *K Shishida*, A Hashizume, K Onoda, A Kinoshita, H Yamashita, Y Okamoto, K Kurisu, S Yamawaki*
- P-096 Time-frequency analysis of magnetoencephalographic signals during a visual language task *F Takeuchi*, K Kamada, S Kuriki*
- P-097 Eye movement effects on word processing during a word recognition task using anatomically constrained magnetoencephalography (MEG) and electroencephalography (EEG) *S Temereanca*, M Hamalainen, E Halgren, E Brown*
- P-098 Gender differences in the attentional effects on the emotional speech perception: An MEG study *H Yagura*, S Iwaki, M Tonoike, S Nakagawa, S Ogino*
- P-099 Neural basis of perceptual asymmetry for the stimulus order effect: A cross-language MEG study *Y Zhang*, T Imada, M Kawakatsu, P Kuhl*
- P-407 Abstract phoneme representations in children: A magnetic mismatch negativity study *A. Shestakova**

P3-1 Signal Processing

- P-100 Topography-time-frequency models for single event M/EEG analysis *C Bénar*, T Papadopoulos, J-M Badier, M Clerc*
- P-101 Prediction of cognitive states using MEG and blind source separation *M Besserve, K Jerbi, L Garnero*, J Martinerie*
- P-102 Development of the real time S/W gradiometer system using the high speed DSP *D.H. Lee*, H.J. Kim, K.H. Koh, J.K. Shin, C.B. Ahn*
- P-103 Pseudo current density maps: Physical basis and visualization of nerve conduction *M Burghoff*, W Haberkorn, U Steinhoff, B-M Mackert, H Koch*
- P-104 Dynamic causal modeling of induced responses *C Chen*, SJ Kiebel, J Kilner, N Ward, KJ Friston*
- P-105 Automated identification of fetal magnetocardiogram source signals by means of approximate entropy *S Comani*, D Mantini, S Vairavan, G Alleva, E Chikkannan, S Natarajan, GL Romani*
- P-106 Influences of volume conduction on phase distributions *A Daffertshofer*, C Stam*
- P-107 MEG anatomy toolbox: A new toolbox for the anatomical identification of neuromagnetic data *J Dammers*, H Mohlberg, F Boers, P Morosan, A Malikovic, K Zilles, K Amunts, K Mathiak*
- P-108 Automatic artifact rejection from independent components of magnetoencephalographic data *J Dammers*, M Schiek, K Pilz, F Boers, M Zvyagintsev, K Zilles, K Mathiak*
- P-109 Linear and non-linear directional interaction measures applied to paced and self-paced finger movements: an MEG study *F Darvas*, H Hui, C Dale, G Simpson, E Kucucaltun-Yildirim, S Bressler, R Leahy*

POSTER LISTING

- P-110 Comparison of BSS algorithms in SMCG data *D Di Pietro Paolo**, *H-P Mueller*, *W Tedeschi*, *M DeMelis*, *SN Ern *
- P-111 Noise reduction in CHD patients by means of BSS *D Di Pietro Paolo**, *H-P Mueller*, *W Tedeschi*, *JW Park*, *F Jung*, *SN Ern *
- P-112 RT-Matcher of data with different heart beats rate *D Di Pietro Paolo*, *M De Melis**, *W Tedeschi*, *M Goernig*, *SN Ern *
- P-113 Automatic reconstruction of functional networks from a Principal Component Analysis of the signals in magneto- and electro-encephalography *A Dossevi*, *L Garnero**, *H Ammari*
- P-115 Auditory cortical steady-state responses exhibit rich phase resetting dynamics: possible consequences for time-domain signal averaging? *A Hadjipapas**, *A Fisher*, *M Simpson*, *C Witton*, *I Holliday*, *G Barnes*
- P-116 Bayesian interference suppression and source extraction *S Nagarajan**, *H Attias*, *K Sekihara*, *K Hild*
- P-117 Linearly constrained MEG beamformers for MVAR modeling of cortical interactions *H Hui**, *R Leahy*
- P-118 On adaptive beamformers *T Imada**
- P-119 Registration of cortical surfaces using sulcal landmarks for group analysis of MEG data *A Joshi**, *D Shattuck*, *P Thompson*, *R Leahy*
- P-120 Least squares estimators of multi-pair Kronecker product noise covariance for spatiotemporal MEG/EEG data *S Jun**, *J George*, *S Plis*, *D Ranken*, *D Schmidt*
- P-121 Robust spatiotemporal noise covariance estimation from limited averaged MEG/EEG noise information *S Jun**, *S Plis*, *D Ranken*, *D Schmidt*
- P-122 A study on wavelet filtering of fMRI multimodal imaging with spectral noise *SC Kang**
- P-123 Application of random field theory to EEG/MEG data in space and time *J Kilner**, *L Otten*, *J Glensman*, *K Friston*
- P-124 Inverse solution for time-correlated multi-sources using Beamformer method *T Kimura**, *M Kako*, *H Kamiyama*, *A Ishiyama*, *N Kasai*
- P-125 The brain computer interface using flash visual evoked potential and independent component analysis *PL Lee**, *JC Hsieh*, *CH Wu*, *TC Yeh*, *YT Wu*
- P-126 Noise reduction in somatosensory evoked fields measured by means of a Vector Biomagnetometer *M Liehr**, *R Huonker*, *J Hauelsen*
- P-127 Information content in three axial measurements versus mono axial measurements quantified using projection methods on experimental torso phantom data *M Liehr**, *T Gargano*, *CM Arturi*, *L Di Rienzo*, *J Hauelsen*
- P-128 Standardization of MEG sensors by signal space separation *P Lioumis**, *S Taulu*, *D Kicic*, *J Nenonen*, *J Montonen*
- P-129 Improved test-retest reliability of P50 sensory gating using MEG source modeling *B Lu*, *J Canive**, *J Edgar*, *A Jones*, *A Smith*, *M Huang*, *G Miller*
- P-130 Brain interactions from MEG data using the imaginary part of coherency *L Marzetti**, *G Nolte*, *S Della Penna*, *R Franciotti*, *G Stefanics*, *V Pizzella*, *G.L. Romani*
- P-131 Investigation of a two-point maximum entropy regularization method for signal enhancement applied to MEG data *Q. Matthews**, *A. Jirasek*, *N. Virji-Babul*, *A. Babul*, *T. Cheung*
- P-132 Generalized sidelobe canceller for noise reduction in MEG arrays *J Mosher**, *M Hamalainen*, *R Leahy*, *D Pantazis*, *P Volegov*
- P-133 Transfer function analysis of different MEG arrays using a phantom and pseudorandom noise *J Mosher**, *M Hamalainen*, *S Ahlfors*, *C Aine*, *A Georgopoulos*, *A Leuthold*, *P Volegov*, *M Weisend*
- P-134 A graphical model for estimating time-frequency components of event-related responses from noisy MEG/EEG data *S.S. Nagarajan**, *H.T. Attias*, *S.S. Dalal*
- P-135 Data conversion to reduce inter-subject variations and its application to variance analysis *I. Nemoto**, *M. Abe*, *M. Kotani*
- P-136 Total information extracted from MEG measurements *J Nenonen*, *S Taulu**, *M Kajola*, *A Ahonen*
- P-137 A novel mechanism for evoked responses in the human brain *V Nikulin**, *K Linkenkaer-Hansen*, *G Nolte*, *S Lemm*, *K Mueller*, *R Ilmoniemi*, *G Curio*
- P-138 Dipole estimation with a combination of noise reduction and spatial filter *S Okawa**, *S Honda*
- P-139 Poisson spatial point process distribution of dipoles for solving the MEG inverse problem *M. Ortner*, *A. Nehorai**, *H. Preissl*
- P-140 Spatio-temporal reconstruction of bilateral auditory steady state responses: A comparative evaluation of different beamforming algorithms *M Popescu**, *EA Popescu*, *K Fitzgerald-Gustafson*, *J Lewine*

POSTER LISTING

- P-141 Effects of covariance matrix estimation on correlated source cancellation in beamformers *T Qureshi, B Van Veen**
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